

Appl. No. 10/669,501  
Amendment dated: April 21, 2005  
Reply to OA dated: February 10, 2005

### **REMARKS**

The Office Action Summary for the outstanding Office Action indicates that acknowledgment is made of a claim for foreign priority under 35 U.S.C. §119 and that all certified copies of the priority documents have been received. Applicants would like the record to show that, at this time, no foreign priority under 35 U.S.C. §119 has been claimed and no certified copies have been submitted, as reflected in the Application Data Sheet.

New independent claim 9 has been added to more particularly define the invention. New claim 9 requires that the polymerization be homopolymerization. Support for this amendment may be found throughout the specification. Applicants most respectfully submit that all the claims now present in the application are in full compliance with 35 U.S.C. §112 and are clearly patentable over the references of record.

The rejection of claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over Chan has been carefully considered but is most respectfully traversed. The Office Action urges that Chan teaches a process for preparing copolymers of pentafluorophenyl acrylate (PFPA) comprising mixing AIBN, a chain transfer agent, with PFPA and another monomer in a reaction vessel. The reaction vessel is heated to 70°C for 20 minutes followed by heating to 100°C for 20 minutes. Finally the reaction vessel is heated to 150°C to remove residual monomer. The Office Action acknowledges that Chan differs from the present invention in two respects: 1) the ultrasonic treatment is absent and 2) with respect to some dependent claims the specific conditions are different (longer time periods and higher temperatures).

With respect to the missing step of ultrasonication treatment, the Office Action urges that, based on the specification, this element is not critical. Applicants specifically traverse this statement.

Applicants would like to begin by pointing out that while the comparative data for the specification demonstrates the criticality of the second period of heating, the comparative data cannot be understood to show that ultrasonication treatment is not

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critical. The ultrasonication treatment is essential because the initiator is not sufficiently soluble in the pentafluorophenyl acrylate monomer without this step. The specification clearly supports this assertion. As can be seen on page 3 of the specification at line 8-9, the reaction mixture is subjected to an ultrasonication treatment so that the mixing of the initiator and the monomer is enhanced. Also, as can be seen on page 4 of the specification lines 14-17, the inventors of the present application use an ultrasonication treatment at the beginning of the polymerization to break the initiator particles and to enhance the mixing of the initiator of the monomer, so that bulk polymerization can undergo more uniformly. Thus, it can clearly be seen that the ultrasonication treatment is critical and therefore must be considered as part of the claim language.

Applicants wish to direct the Examiner's attention to the basic requirements of a prima facie case of obviousness as set forth in the MPEP § 2143. This section states that to establish a prima facie case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Section 2143.03 states that all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

As stated in the outstanding Office Action, Chan fails to disclose an ultrasonication step. Because Applicants have shown that this step is critical and therefore must be considered and because Chan fails to teach each and every element of the claimed invention as required by MPEP Section 2143, a §103(a) obviousness

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rejection based on Chan is improper. Applicants respectfully request that this rejection be withdrawn.

With respect to the acknowledgment in the outstanding Office Action that Chan fails to disclose some of the specific conditions as recited by the dependent claims in the present application, the Office Action urges that processes requiring longer periods of time and higher temperatures is optimization. Applicants specifically traverse this statement.

The portion of Chan cited by the Office Action as showing heating at various temperatures for various time limits specifically recites a heating interval of 20 minutes. To the contrary, the present invention contemplates heating intervals of 4 hours to 36 hours. Thus, Applicants assert that it is not mere optimization when the difference between time intervals disclosed in Chan and those disclosed by the present application is so substantial.

Applicants would also like to note that Chan fails to disclose a second heating period that is conducted under vacuum pressure as recited by claim 1. Chan further fails to disclose vacuum pressure ranges for the second heating step as claimed in claims 5 and 6. Thus, because Chan fails to disclose each and every limitation of claim 1, applicants respectfully request that this rejection be withdrawn.

Finally, Applicants would like to draw attention to new claim 9 which recites that the process for preparing pentafluorophenyl acrylate polymer by bulk polymerization is a process by which homopolymers are produced by bulk homopolymorizing. Because the present invention recites the polymerization of only pentafluorophenyl acrylate, the natural result of the process is homopolymer. To the contrary, the Chan reference specifically discloses a process for preparing copolymers of pentafluorophenyl acrylate (PFPA) comprising mixing AIBN, a chain transfer agent, with PFPA and another monomer in a reaction vessel. Thus, Chan clearly fails to disclose the same invention as recited in claim 9 of the present application.

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In view of the above comments and further amendments to the claims favorable reconsideration and allowance of all the claims now present in the application are most respectfully requested.

Respectfully submitted,  
  
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